SATLINK Modulator DVB- T
WS 6990

USER'S MANUAL

CONTENTS

1. GUIDE 2

1.1 IMPORTANT SAFETY INSTRUCTIONS 2
1.2 GENERAL DESCRIPTION 2
1.3 PRODUCT OVERVIEW & ILLUSTRATION 3

2. FEATURES 4

3. THE MENU OSD INSTRUCTION 5

4. TECHNICAL SPECIFICATION 6

1. GUIDE

1.1 IMPORTANT SAFETY INSTRUCTIONS

Thank you for choosing our product. Before installation, we would like to remind you some notes, which is very important for operating safely and properly, as follows:

- Be sure to read this user manual before starting your operation.
- When the unit is suddenly moved to a hot area from a cold area, it may cause some problems. In that case, turn off the power, and turn on again after 1-2 hours.
- Keep modulator placed in clean space with sufficient ventilation.
- Do not cover the modulator with or place it on a unit that emits heat.
- Clean the case by a soft cloth with a little washing liquid.
- Do not remove the cover.
- Do not let the unit exposed to extreme heat, cold or humid conditions.
- No liquids or any other materials to come inside of the unit.

1.2 GENERAL DESCRIPTION

WS-6990 is a composite video input standard definition DVB-T modulator which provides COFDM RF signal in range of 50-860MHz.

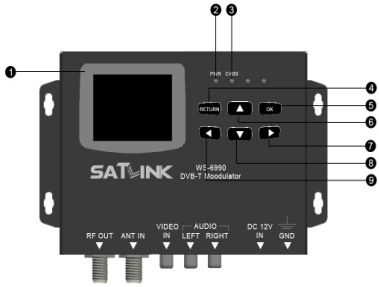
It consists of A/D, Coding, Modulation, Frequency conversion which provides bandwidth of 6/7/8MHz to select.

It is designed to achieve 576i/480i(PAL/NTSC) and stereo input, and it can also supports standard H.264 encoding.

It is an excellent choice to transport video/audio signals from TV satellite receivers, surveillance camera or video/media players to a LCD TV or set-top-box.

It can be used in series with other WS-6990 so the number of channels in the coaxial cable no the SMATV system can be increased as desired.

1.3 PRODUCT OVERVIEW & ILLUSTRATION



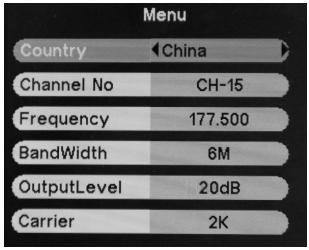
NO	Description	FUNCTION
1	LCD Screen	Video display
2	PWR	Power indicator light
3	CVBS HDMI	CVBS indicator light
4	RETURN	Return submenu and save settings
5	OK	Confirm the current operation
6	▲	Change the frequency point or cursor up
7	▶	Switch settings in menu or cursor right
8	▼	Change the frequency point or cursor down
9	◀	Switch settings in menu or cursor left
10	RF OUT	Rf output port
11	ANT IN	Terrestrial Digital signal input port
12	VIDEO IN	Composited video input port supports NTSC and PAL
13	AUDIO IN	Stereo audio signal input port
14	DC 12V IN	Connect to Adaptor Input

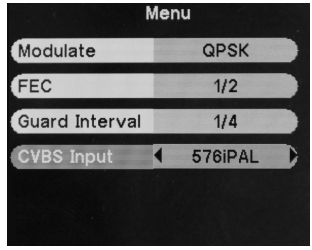
2. FEATURES

- High level of integration, high-performance, Full-featured, integrated design
- Single input modulator that converts analogue A/V source to a DVB-T channel
- Standard COFDM modulation and H.264 encoding
- Multiple video format compatibility including 576i(PAL) and 480i(NTSC)
- Bandwidth: 6/7/8MHz
- Frequency range: 50~860MHz
- Continuously adjustable RF signal output level range 70dBuV from 100dBuV, step 1dBuV
- 2.4-inch color LCD display
- Small size and light weight
- Carriers 2K and 8K
- User friendly setup and control
- Compact and wall mountable
- Support High-Bandwidth Digital Content Protection /HDCP /

3. THE MENU OSD INSTRUCTION

Modulator will initialize to the main interface after power on, and press OK into the main menu.





- **Country**: press ◀▶ key to change country.
- **Channel No**: press ◀▶ key to change the channel number.
- **Frequency**: frequency setting in range of 50~860MHz, press ◀▶ key to move cursor and press ▲▼ key to change numbers.
- **BandWidth**: press ◀▶ key to select bandwidth of 6/7/8MHz.
- **Output Level**: RF output level setting, press ◀▶ key to change value in range of 70~100dBuV.
- **Carrier**: carrier setting, press ◀▶ key to select 2K or 8K.
- **Modulate**: modulation mode setting, press ◀▶ key to select QPSK, 16QAM or 64QAM.
- **FEC**: FEC code rate setting, press ◀▶ key to select 1/2, 2/3, 3/4, 5/6 or 7/8.
- **Guard Interval**: guard interval setting, press ◀▶ key to select 1/4, 1/8, 1/16 or 1/32.
- **CVBS Input**: video input selection, press ◀▶ key to choose 576i(PAL) or 480i(NTSC).

4. TECHNICAL SPECIFICATION

Modulator	Standard	DVB-T
	Constellation	QPSK / 16QAM / 64QAM
	Bandwidth	6 / 7 / 8 MHz
	Carriers	2K / 8K
	Guard Interval	1/4, 1/8, 1/16, 1/32
	Code Rate	1/2, 2/3, 3/4, 5/6, 7/8
	MER	35 dB
	Frequency Range	50 ~ 860 MHz
	Output Level	70 ~ 100 dBuV
	Output Impedance	75Ω
Video	Input Format	CVBS HDMI
	Encoding Format	H.264
	Video Resolution	576i PAL / 480i NTSC
	Connector	RCA
Audio	Input Format	Stereo L/R channel
	Encoding Format	MPEG-1 Audio Layer II
	Connector	RCA
General	Power Source	DC 12V / 1.5A
	Operating Temperature	0 ~ +50°C
	Dimensions	155mm(L) × 114mm(W) × 33mm(H)
	Weight	0.5Kg

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